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Subject: Environmental Regulation of Spent Potlinings

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The purpose of this memorandum is to provide an update on regulatory activity on spent potlinings.

Spent potlining was first listed by EPA as a hazardous waste in July, 1980. The basis for this waste listing was that the waste contained cyanides, and that groundwater pollution had already occurred at several sites where potlining was stored or disposed of. The effect of this listing was to classify landfills at Sebree and Columbia Falls as hazardous waste disposal sites. In 1980 RCRA was amended to place certain restrictions on the regulation of solid wastes generated from the "extraction, beneficiation, and processing of ores and minerals". This provision, which became known as the Bevel amendment, required EPA to conduct an extensive study of the hazards posed by mining wastes before such wastes could be regulated as hazardous wastes. On January 12, 1981, EPA made an interpretation that the Bevel amendment applied to smelting wastes, including spent potlining. Accordingly, the hazardous waste listing for spent potlining was temporarily suspended pending completion of the mining waste study. EPA stated at the time that they believed spent potlining to be hazardous, and would relist it after completion of the required study.

Until recently, EPA considered the study of smelting waste to be low priority. As a result of citizen objection to a proposed landfill at EASTALCO, the issue has again surfaced. Congressman Florio has written a letter to EPA administrator Ruckelshaus, stating that Congress did not intend for potlining to be included in the Bevel amendment exemption. EPA has contracted with PEDCO, Inc. to conduct the smelting waste study. The study will be completed in June 1984 and will include lead, copper, zinc, and aluminum smelters. EPA has also asked legal counsel for an opinion as to the scope of the Bevel amendment.

The standards for hazardous waste landfills are becoming more and more stringent. New landfills must now have synthetic liners, leachate collection and monitoring wells. Any groundwater contamination detected during operation or after closure of the landfill must be corrected by pumping the contaminated water out of the ground, and treating prior to discharge. Disposal of spent potlining in an on site landfill built to these standards is estimated to cost 100 dollars/ton. Offsite disposal costs are even higher, with the closest hazardous waste landfill located hundreds of miles from either Sebree or Columbia Falls.

The Aluminum Association's environmental committee is conducting a feasibility study on the disposal of spent potlining by fluid bed combustion. Work by Battelle Laboratories, and General Atomics is currently in progress. Recovery of chemical values (aluminum fluoride) for spent potlining is not included in the study. A parallel study is underway to characterize cyanide found in spent potlining and other aluminum reduction waste streams. The environmental committee has tentatively concluded that, under the present hazardous waste definition, we will be unable to challenge an EPA action to relist spent potlining.

The landfill capacity at both Sebree and Columbia Falls is limited, and new landfills will need to be constructed by 1985 or 1986. It is anticipated that these will need to be built to hazardous waste landfill standards. ARCO Metals' research project on the recovery of fluoride from spent potlining has the potential to reduce both the cost and the liability for future waste disposal.

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